The Ethics of Authorship and Publication

Case 1

Dr. Warren is the editor of Biomedical Methodologies, an 8-year old quarterly journal with an international readership and pool of authors. Dr. Warren has just sent an issue's final proofs to press when he receives an e-mail from Dr. Hannah, one of the issue's authors. Dr. Hannah is a rising star in her field. Her paper compares three variations on a particular research method as used in the United States and two European centers. Dr. Hannah collected her European data from the published literature while working as a visiting fellow in two prominent research institutes. In both settings she worked with little supervision or collaboration, but she established good personal relationships with the other researchers there.

Dr. Hannah wants to make a late correction to her article, adding four more authors. A few weeks before she had enthusiastically sent copies of her author's proofs to the directors of the two European labs where she had worked. That morning, however, Dr. Hannah received a stern letter from the director of the second facility informing her that sharing authorship credit was the norm in his country. Dr. Hannah now fears that she erred seriously in not listing both center directors and her two office mates as authors despite their having had almost no role in designing the project and none in writing the paper. She is worried that any future European collaboration depends on adding their names to the paper.

The journal's policy is that authors take responsibility for assigning authorship, yet Dr. Hannah acknowledges that her attribution will be false. She has also cited the paper elsewhere as hers alone — "forthcoming" in the journal. Practically, the entire article will have to be reset to add four names and their affiliations, adding potentially significant expense and delay to its publication.

Should Dr. Warren add the additional names to the title page?

Case 2

Members of the Grand Old State University (GOSU) Biology Department had recently submitted a large, complex program project grant to the National Institutes of Science, and Professor Kane, chair of the Biology Department at Competitive State University (CSU), was part of the site visit team. Professor Kane was impressed by the department's research in support of the grant application. GOSU researchers reported that one particularly exciting patch clamp study using frog skin had recently been accepted for publication in the American Journal of Biology. It demonstrated a new single-channel protein that actively transported a specific molecule that had been found polluting the water in local streams. This transport proved toxic to the skin cells. The article speculated that this newly discovered channel might be involved with the recent death of frogs in the region.

When Professor Kane returned to CSU, he mentioned this work and the forthcoming article to Dr. Tristan and his graduate student Yazmin, who were working on a similar patch clamp system. That afternoon, Dr. Tristan asked Yazmin to see if she could repeat the results that Professor Kane had described. Knowing the details of the work at GOSU, Yazmin had no trouble repeating the experiment, and she wrote it up for Dr. Tristan. The next Monday Yazmin was dismayed when Dr. Tristan showed her a Brief Report that he had written using her patch clamp data. He intended to submit it to the Aquatic Pathobiology Journal with both of them as authors. The Aquatic Pathobiology Journal was edited by one of
Dr. Tristan's friends and typically had a short turnaround time before publication. Dr. Tristan expressed confidence that they could beat the GOSU team's study into print. When Yazmin had initially repeated the GOSU patch clamp experiment, she had had no intention to use the data for publication. Yet now she was reluctant to confront her PI about his unauthorized knowledge of the GOSU study and was somewhat eager to get her name on this easy paper directly related to her own research.

How should Yazmin respond to Dr. Tristan's plans for publication?

Management of and Access to Scientific Data

Case 8

Joseph is a second-year doctoral student in microbiology who entered the program with a master's degree from his native country. He works in a large lab with several other students, fellows, and technicians. Their PI travels frequently, and Carol, a senior technician, is in charge of almost all of the lab's day-to-day activities.

Joseph originally expected a close working relationship with his new adviser, and was disappointed that they seldom saw each other. He was also surprised that Carol wanted to review his work every week. She routinely examined his notebooks and questioned his methods, results, analysis, and plans for future experiments. Carol seldom gave feedback other than short critical notes like "this can't be right." After several weeks, Joseph asked Carol whether she was unhappy with his work. Carol replied that she was not dissatisfied but rather that she was responsible for the students when the PI was away. She found that reviewing students' lab notebooks was the best way to measure their progress. None of the other students complained, but Joseph resented having his worked checked by a technician, and her supervision felt like an invasion of his privacy.

One afternoon, in the middle of a complex experiment, Joseph had an idea for a new procedure that he outlined in a mix of his native language and English. Later that week, when Carol reviewed his notebook, she said nothing about the strange notation. Joseph recognized that he could maintain some privacy by taking notes in his native language.

Now at the end of the year, Joseph keeps roughly half of his records in his native language with enough basic documentation in English to satisfy Carol that he is making progress.

Are Joseph's record-keeping methods acceptable?
Darlene is an advanced graduate student at State Land-grant University. She is about to finish her dissertation on the cloning of a gene and the biological actions of the protein it produces. A manuscript describing her results has already been accepted for publication in a competitive journal. When Darlene started graduate work at State, she had elected to work with Dr. Goforth because his laboratory was well supported by NIH funds, he had an impressive publications record, and he had supervised several Ph.D. students who had gone on to good academic positions. Darlene has always gotten along well with Dr. Goforth and is sorry to be leaving his lab.

Darlene has been offered a postdoctoral fellowship at another university. Her future mentor has requested that she bring samples of various biological reagents that she had produced during her doctoral training so that they could continue to develop her research in this area. However, when Darlene asked Dr. Goforth about how best to take the samples with her, Dr. Goforth not only refused to let her have samples but also told Darlene that she had to leave her computerized database and laboratory notebooks at State as well. Darlene was so stunned by this response that she couldn’t even think to ask why.

How can Darlene ethically retain access to dissertation research data and the biological tools that have been the foundation of her work? How should she respond to Dr. Goforth’s refusal to let her take essential data and materials with her?

The Work of the Academic Scientist

Sean is a fourth-year graduate student in Dr. Murray’s research group who is purifying a newly discovered enzyme from beef heart. Both he and Dr. Murray think this enzyme should be important to the metabolic integrity of the heart.

Dr. Murray encourages her students to communicate openly with other researchers and to present their work at meetings whenever possible. When Sean presented his dissertation work in a 10-minute talk at a regional meeting, he received good comments from several members of the audience. One listener, Dr. Frank, invited Sean to dinner that night to talk about their common research interests. Over dinner Dr. Frank asked Sean many questions about his work with Dr. Murray. True to Dr. Murray’s philosophy, Sean talked openly with Dr. Frank. When dinner was over, Sean told Dr. Frank that he had enjoyed their conversation and looked forward to an ongoing professional exchange.

Three months later, Sean learned that Dr. Frank had published a paper in Online Biological Notes about a very similar enzyme from sheep lung. Although the purification reported by Dr. Frank was less extensive than the one that Sean had accomplished, Dr. Frank’s paper reported some kinetic properties of the sheep lung enzyme that were to have been a major part of Sean’s dissertation.

Sean is devastated and afraid that his dissertation research has been wasted. How should Sean proceed with his dissertation? What should Sean tell Dr. Murray about Dr. Frank’s article?
Case 6

Marie and Leon are second-year graduate students working under Dr. Ortega, a prominent scientist whose research team includes several trainees at various points in their studies. The lab has a very collegial atmosphere that Marie and Leon enjoy. They typically have worked under the supervision of Charles, a postdoctoral fellow who will take a tenure-track position at another university at the end of the year.

One morning, the newspaper carries a front-page story that a researcher from the university's medical school is under investigation for scientific misconduct. No one in the lab can talk about anything else as they try to figure out from the article what could have happened. Charles, Marie, and Leon identify a number of errors in the reporter's discussion of the basic science behind the case. Charles is adamant that researchers need to support each other and science itself against uneducated lay critics, and he is eager to dispute the article. Together the three draft a letter to the editor of the newspaper pointing out the problems with the original story and disagreeing with the reporter's conclusions about the medical school researcher's actions.

Before mailing the letter, they take it to show Dr. Ortega. Surprisingly, Dr. Ortega is very critical of the letter and their desire to respond to the newspaper article. "You're right that the article is very misleading, but I can't let you submit this," says Dr. Ortega. "Everything that is sent out of this lab for publication reflects on me, this department, and this university. We can't get involved in this mess or it will look as if we know something about the guy's work. We don't really know what he was doing, and I don't even understand that much about the field. But once the press gets your letter, there will be no end to the calls, and we may all be treated like suspects. I'm sorry, but this is for the authorities to sort out."

How should the three trainees respond to the newspaper article in light of their advisor's objections?